
CHAPTER 21

CUT SLOPE SAFETY

A CALTRANS/CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (Cal-OSHA) AGREEMENT ON CUT SLOPE SAFETY

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CHAPTER 21

21.00 INTRODUCTION

This chapter explains the agreement between the Department of Transportation (Caltrans) and the Department of Industrial Relations, Division of Safety and Health (Cal-OSHA) regarding work-associated with cut slopes. This information covers only cut slope operations performed by Caltrans Maintenance Program employees. Other work disciplines, such as engineering geologists, should develop separate operating instructions and/or codes of safe operating practices.

21.01 PURPOSE

The purpose of this chapter is to explain the provisions of the agreement between Cal-OSHA and Caltrans that relate to specific on-site work while engaged in cut slope activities.

Questions regarding broad policy application should be directed to the Maintenance Program Manager or the Headquarters Office of Safety and Health.

21.02 POLICY STATEMENT

Division of Maintenance supervisors responsible for cut slope operations shall comply with the requirements of the agreement.

21.03 PLANNING THE WORK

Before work begins, a pre-job conference or tailgate safety meeting shall be held to discuss: the work schedule; the effects of adverse weather conditions, slide removal, rockfall, and slope renovation; and other hazards known to be associated with cut slope operations.

Supervisors shall review and discuss Appendix E in the Caltrans Code of Safe Operating Procedures Manual along with any applicable code(s) pertaining to cut slope safety.

All motorized equipment, appropriate hand tools, and personal protective safety devices and equipment applicable to the work activity, including illumination, shall be available before the work begins.

21.04 CUT SLOPE INSPECTIONS

Before work begins, the supervisor shall make a visual inspection of the work zone to determine if the cut slope is stable, or if a rock slide or other unstable condition may exist. If the inspection reveals that the cut slope appears to be stable, the planned work activity may begin.

If the inspection reveals the cut slope or area surrounding the cut slope shows sign of significant movement or other unstable conditions, the work shall not begin and the supervisor shall designate an employee as *competent** to inspect the work site.

***Note:** Section 1504(a) of the Construction Safety Orders (CSO) defines a *competent person* as: “One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.”

The supervisor's determination regarding who shall be designated *competent* shall include the following factors:

1. The employee's previous work experience in slide and rock removal and slope maintenance.
2. The employee's understanding of the general effects of rain, temperature changes, wind and freeze/thaw cycles on slope stability and terrain conditions.
3. The employee's familiarity with the geographical area where the work is to be performed.

The individual designated as the *competent person* shall investigate the work zone to determine if it is safe to enter and begin the planned work activity. If it is determined that the slope is unsafe or unstable, no work shall be allowed.

The supervisor and/or area superintendent should contact an appropriate geology unit for a more detailed investigation and evaluation of the cut slope area.

No work may then be permitted until such time as an engineering investigation has been conducted and the cut slope area has been determined to be stable and safe to enter.

21.05 WORK DURING HOURS OF DARKNESS

Cut slopes shall be illuminated whenever employees are required to work during the hours of darkness. The illumination shall be sufficient to provide light adequate to detect the possibility of rockfalls, slides, or slope movement.

The amount of illumination shall be determined by the supervisor based on each particular work situation. The supervisor shall review the scope of the operation, type of natural rock and/or soil material, and the amount and type of equipment involved. Vehicular headlights, spotlights, or more extensive lighting, such as portable lights shall be considered.

21.06 INSPECTIONS DURING ROUTINE MAINTENANCE OPERATIONS

Drive-by visual inspections of cut slope areas should be included as employees conduct routine roadway inspections for the purpose of rockfall and/or snow removal. The visual inspection assists in identifying the amount of rockfall and debris on the roadway and the general condition of a cut slope area.

Any significant amount of rockfall or debris on the roadway should be reported to the supervisor who shall then conduct a drive-by visual inspection to determine if a cut slope is stable or unstable.

If a *moving operation* is going to be performed in a cut slope area (commonly called *rock patrol*), the supervisor shall conduct an advance visual inspection of the cut slope and nearby area. The inspection is to ensure that the area is stable and the *moving operation* can be performed without likelihood of falling rocks or other debris obstructing the work.

Personnel involved in *moving operations* in known and active rockfall/slide areas shall maintain radio contact with their radio base station or coworkers. If radio contact is difficult, occasional personal contact and/or telephone calls to the base station are encouraged.

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